

In the Claims

1.(Currently Amended) An in-line early reflection enhancement generation system comprising:

one or more microphones positioned close to one or more sound sources within a room or other space so as to detect predominantly direct sound;

an early reflection generation stage which has a finite impulse response and which without internal feedback generates a number of delayed discrete reproductions of the microphone signals and which has unitary power gain whereby the stability of the system is independent of the delay times and amplitudes;

a number of loudspeakers placed to broadcast said delayed discrete reproductions of the microphone signals early reflected energy into the room or other space.

2.(Original) An in-line early reflection enhancement system according to claim 1 wherein the early reflection generation stage also includes at least one cross coupling matrix.

3.(Original) An in-line early reflection enhancement system according to claim 1 wherein the early reflection generation stage includes a series connection of two or more cross-coupling matrices with a set of delay lines positioned between the two matrices.

4.(Currently Amended) An in-line early reflection enhancement generation system according to claim 2 or claim 3 wherein said cross-coupling matrix or matrices are orthonormal matrices.

5.(Currently Amended) An in-line early reflection enhancement generation system according to claim 1 wherein each input is coupled to every output to provide a maximisation of diffusion of the input signals to all of the outputs.

6.(Currently Amended) An in-line early reflection enhancement system according to claim 1 ~~any one of claims 1 to 5~~ in combination with a wideband non-in-line assisted reverberation system which increases apparent room volume, including multiple loudspeakers to broadcast sound into the room, and a reverberation matrix connecting a similar bandwidth signal from each microphone through one or more reverberators having an impulse response consisting of a number of echoes the density of which increases over time, to one or more loudspeakers.

7.(Original) An in-line early reflection enhancement system according to claim 6 wherein in said wideband non-in-line assisted reverberation system the reverberation matrix connects a similar bandwidth signal from each microphone through one or more reverberators to at least two loudspeakers each of which receives a signal comprising a sum of at least two reverberated microphone signals.

8.(Currently Amended) A method for enhancing the acoustics of a room or auditorium comprising detecting predominantly direct sound with one or more microphones positioned close to one or more sound sources, generating a number of delayed discrete reproductions of the microphone signals in an early reflection generation stage having a finite impulse response and without internal feedback, and which has unitary power gain whereby the stability of the system is independent of the delay times and amplitudes, and broadcasting said delayed discrete reproductions of the microphone signals early reflected energy into the room.

9.(Original) A method according to claim 8 wherein the early reflection generation stage includes at least one cross coupling matrix.

10.(Original) A method according to claim 8 wherein the early reflection generation stage includes a series connection of two or more cross-coupling matrices with a set of delay lines position between the two matrices.

11.(Original) A method according to claim 9 or claim 10 wherein said cross-coupling matrix or matrices are orthonormal matrices.

12.(Original) A method according to claim 8 wherein each input is coupled to every output to provide a maximisation of diffusion of the input signals to all of the outputs.